RECORD

1972

2039-
2486

Zanoni

Vol. 348F

THOMAS A. ZANONI

1972
TRIPS

Zanoni #'s 2039 to 2549.

R. Goforth #'s 1-5

plants w/o #'s eg. 2a-15 = last 2400
& Aug 1972 Trip

① J. flaccida Schl.

1838 Linnaea XII : 495

② J. Deppeana Stend.

* 1840 Nomen. Botanicus Ed II.

~~1830~~ 835

1830 Linnaea V : 77 (Schl.)

1838 Linnaea XII : 494 (Scheibe)

③ J. pachyphlaea. Torrey

Rep. Expl. Survey from the Mississippi River to the Pacific Ocean IV : 142 1857

④ J. TETRAGONA Schl.

1838 Linnaea XII : 495

1794 Meth. Pl. 699 (Moench.)

Digitized by the Internet Archive
in 2017 with funding from
BHL-SIL-FEDLINK

https://archive.org/details/mexico1972number348zano

(5) J. monticola

* HBK Nova Gen & Sp Pl. II, 3

Sect. II, 2.
Cupressus Sabinoides

♀ C. foliis arctissime quadrifariam imbricatis, triangulari-ovatis, obtusis, crassis.

♀ Crescit locis scopulosis, apricis montis Cofre de Perote, juxta El Pinahuitepeque, alt. 1500 hexap. (Regno Mexicano) ħ

♀ Arbor ramis sparsis, teretibus, laevibus, fuscescenti-cinereis; ramulis foliiferis quadrangularibus, subdistichis. Folia sessilia, arctissime quadrifariam imbricata, triangulari-ovata, coriacea, crassa, obtusa, dorso subcarinata, glabra, quartam aut tertiam partem racemae longa,

in ramulis adultioribus.
saepe lineam longa,
minus tamen densa. Flores
et fructus desiderantur.

9 An vere hujus generis,
nec rectius Juniperi Species?
habitu enim Junipero Sabinae
proxima.

Mortreda

J. Sabinoides Nees

Linaea 19:706 (1847)

J. mexicana Spreng.

Syst. Veg. 3:909 (1826)

(6) Juniperus Californica (Carr.) Antoine

Conif. 58

Sabina californica Carr.

Rev. Hort. 352 (1854)

Steudel, ERNESTO Theoph. (Eudel)
1840. NOMENCLATOR
BOTANICUS. STUTTGARTIAE ET.
~~Tub~~ Tubingae.

P. 835 J. deppeana Steud. ♄ Mexico
J. mexicana. Chmss. Schlecht.
Cham Spr.

J. mexicana Chmss. Schlecht. —
see J. Deppeana.

J. mexicana Spr. ♄ Mexico
Cupressus Sabinoinides H.B.

J. flaccida Schlecht ♄ Mexico

1845 Linnaea 19: 681–750

Nees, C.G. and Seb Schauer,
1845 Enumeratio et
Descriptiones Generum novorum
Specierumque plantarum in
Terris Mexicanis Crescentium
Quas Ruhlandus, Colonienſis,
De Berghes et Dr.
Aschen Born Collegerunt.

p. 706

Ordo Cupressineae
Juniperus L.

♀ 1. J. Sabinoides N. ab E.
Cupressus Sabinoides H.B.K.
nov. gen. 2.3. J. mexicana
Spreng. syst. 3.909.
♀ "Cedro" Ruhland exs. n. 45.
Ad Zimapan: Aschenb. exs.
n. 381. ♀.

1838 Sc . 1838. Vorläufige Nachricht über die Mexicanischen Coniferen vom Herausgeber. p. 486 : 496. Linnaea 12:

p. 493-6 15. Juniperus Tetragona n. sp.

♀ Ein Strauch, mit niedergedrückten fast flachen Aesten; die Blätter vierzeilig, dicht über einander liegend, dicklich, eyförmig-stumpf, Früchte kugelig, klein. Bei Mineral del Monte in einer Höhe von 10-11000 F. von C. Ehrenberg gefunden. Diese Art könnte man für Cupressus sabinoides HBK n. halten, wenngleich Kunth die Pflanze als einen Baum beschreibt. Humboldt sammelte sie an sonnigen, felsigen Stellen, am Cofre de Perote bei El Penahuitepec, in einer Höhe von 1500 Toisen. Die jüngsten Zweige sind fast vierzeilig

ziemlich steif, grade oder schwach gekrümmt, die dicklichen kurzen, ungefähr 1/2 - 3/4 Lin. langen Blätter liegen gedrängt übereinander, und sind ganz stumpf, auf dem Rücken convex, mit dem stumpfen Ende eingedrückt, wo die Blätter älterer Zweige sind spitzer. Diese Art liefert kein Harz. Die kugligen Beeren haben im Durchmesser 3-4 Lin., sind aber noch nicht ganz reif. Kunth's kurze Beschreibung giebt die Blätter über 3/4 - 1/3 Lin. an, wie sie an unsern Exemplaren höchstens an den Endspitzen der Zweige vorkommen.

Schlechtendal, D. de. 1830. Linnaea 5: 72

Plantarum Mexicanarum a cel. virr. Schiede et Deppe Collectarum Recensio brevis.

Juniperus L.

(p. 76) 16. Juniperus nepina n. sp. — Species affinis J. virginianae et barbadensi sed distinguenda: ramulis angulatis foliis ternis ovatis acuminatis acutis, dorso convexo sulcato glanduloso, junioribus arcte imbricatis, senioribus patulis; galbulis ovoideo-globosis, superne compressiusculis, squamarum apicibus hinc inde libere prominulis, api 5 circiter lineis longis — — Llanos de Perote Sept.

2039 Argemone turnerae 2 Aug 1972
fl lt. y., no sap running

S of Sign "Pst. el Granero, 33 km
off Rt. 16 E of Aldama, Chih.,
turnoff near Km 73

S of deserted town,
here 20.5 mi. off Rt. 16.
plants also seen at
15.2 mi. S of Rt. 16

2040-2044 Juniperus erythrocarpa 3 Aug 1972
fr pink, 1 stem br at
1½ to 2 feet above ground.
black dusty soil,
grassy area with Martynia
thorn bushes., Rocky
S. side of Road.
Rt. 16, 0.3 mi. E of Km 43,
West of Chihuahua, Chih
on Road to Cuauhtemoc

Chihuahua 28°38'N × 106°05'W
Cuauhtemoc 27°5'N × 107°44'W

~~28°01'~~
appx. 27°N × 107°06'W

Sta Lucia (coord ≈ to Cuauhtemoc
27°05'N × 107°44W

2045-2050 Juniperus (2045-2049) erythrocarpa, Dasyltirion (2050)

3 Aug 72 Rt. 16, 1 mi. E of Km 66, West of Chihuahua, Chih.

N side of Road, Pasture, full of Bouteloua gracilis + B. curtipendula. Composits Sandy on Sandstone. 25-50% stone cover. 99s. + scattered shrubby

2050 Dasyltirion yellow-flowered turning Red-orange on drying.

[Juniperus also common at Km 88 and Km 95 (Sta. Lucia)]

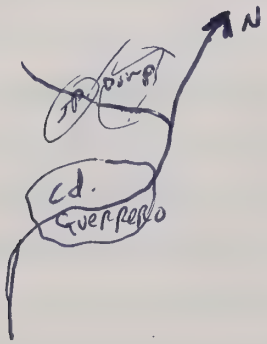
2051. Juniperus erythrocarpa 2 Km E of Km 97 pink fr.

3 Aug 72 Rt. 16, Sta. Lucia, Chih. (Chihuahua – Cuauhtemoc carretera) appx Km 97.

Very common, dominant. shrubby branching just above the ground, little undergrowth

Pedernales, Chih.
28°24'N × 107°06'W

Cd. Guerrero, Chih = 28°33'N × 107°30'W



2052-2056 Jungeia dezpeana robusta

3 Aug 72 Rt. 16, 0.2 mi. E of Km 120., being East of Pedernales, Chihuahua 5 side of Road.

Pine-oak-Jo woods, little undergrowth.

2057 3 Aug. same site as 2052-2056

Oenothera ♀ → R.O. scattered lightly throughout pasture.

2057-2061. 3 Aug. Jungeia dezpeana robusta glands ruptured

← Rt. 16 1.6 mi. beyond GUERRERO, Chih., then 0.3 mi off road to dump.

very common in pasture, etc. grasslands, hills, with composite shrubs (strong for 2 mi. N of side)

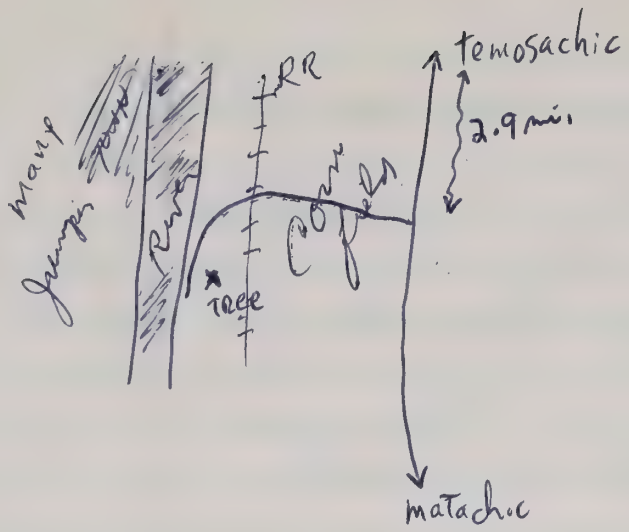


Photo 1-28, 29
of Dasylirion Robusta
25 ft tall,
38 mi. N of Cd. Guerrero (37.8 mi.)
down Town, across River
from RR Tracks.

2062 J. deppeana Robusta
3 Aug 1972 alt. 6500 ft.

18 mi N of Cd. Guerrero, Chih.
on limestone slope
near deep stream bed.
10-15' trees on site.,
more Jp, nearly
Trees erect to erect spreading

[49 mi. N of Cd. Guerrero, grassland Jp 3-4 ft tall]

2063-2067

3 Aug. 1972 Juniperus deppeana Robusta

Rolling grassland pasture
with Junipers. Erect multi-stemmed
fr pasture or gone

opposite adobe houses,
West side of road.
N of Temosachic alt 6500

51 mi. N of Cd. Guerrero, Chih.
14.8 mi. S of Madera, Chih
(Rd. Guerrero to Madera)

(for 9 mi N of Site Jp Common)

slide #1-31,
Jp. deppeana robusta
40 feet tall, East
of Nuevo Madera, Chih.)
with mistletoe in it

Nichols (Sierra, Chih.) = LAS VARAS 29°29 x 108°01
Nuevo Madera = = = LAS VARAS
Madera = 29°30 x 108°20
Gomez Farias, CHIH = ?
Babicora = 29°33'N x 108°01

Juniperus deppeana robusta, north
and South of BACHINIVA, CHIH,
very LARGE, common 15-20 ft.
6400 ft. elev. in GRASS LAND
SAVANA with other TREES.,
South to km 66 along road
in foothills.
also. Km 55-33 on S side of
Col. ALVARO OBREGON, Tall
TREES in SAVANNAH

3 Aug.

2068-2072 J. deppeana Robusta

Pine-OAK-Jp. woods.
grassy, trees branched at ground level,
Jr not abundant on trees.
few females apparent. alt. 7100

On Road from Nuevo Madera to
Nicholas Bravo Chih.
21.8 mi. West of Nicholas Bravo.

2073-77 3 Aug. Juniperus deppeana Robusta

Edge of Road, between road
and Rocky steep slope
in grassy area with Juniper,
Rhus trilobata, Lichens + ferns

.5 mi. S of Gomez Farias,
Chih. alt. 7100 ft.

[Juniper on opposite side
of road combo + comm
for 1 mi. South.]

MEOQUI = 28°17'N 105°29'W

Oenothera South of Km 105 ←
at W edge of Road.

2080 c. Clematis at 2080 site

Same oenothera very comm. →
1 mile WEST of PARRAL on
Road to SAN FRANCISCO del ORO,
Chih..

2078 ARGEMONE BREVICORNUTA.
4 Aug. 1972 white flower. ; yellow orange sap.
mostly pods.
203E East side of Road.
1 mi. N of Km 175 . ; > Rt. 45
North of MEOQUI, CHIHUAHUA.
2078bb ONE PLANT ONLY.
another Argemone sp. at same locality

2079 ARGEMONE BREVICORNUTA
2080
Route 45, 7.3 mi. E of Km 105,
4 Ag. 1972 East of PARRAL, Chih.
Chaparral, Roadside ditch.,
on WEST SIDE OF ROAD.

Sap yellow ORANGE, fl. white,
four PLANTS only.

2080 OENOTHERA
4 Ag. 1972 fl. yellow, fading to orange-red.
very common in Chaparral
Road edge., also N+S of this
site. / OENOTHERA. GRASSES, weeds at Roadedge)

0.4 mi E of Km 180, on Rt. 45
EAST of PARRAL, Chih.

Slide 1-36, →
View from across valley

San Francisco del Oro 26°52 × 105°51

see map in this field book

↓
Huejotitan

2081-
2085 Juniperus erythrocarpa
4 Ag. 1972 FRUIT PINK
Highest hill OVERLOOKING SAND PILES
of mines at San FRANCISCO del ORO,
(West of PARRAL) 6200 ft.
Tps. on all steep sloping h.l.s.
Sparse Sandy Soil, Rock 50-75%.
½ mi. Before TOWN.

2086, 2087 Two species of Oenothera
BASAL Rosette sp. has less frequency
than the Cauline lf. sp.
flowers yellow fading to Red-ORANGE
Same SITE as 2081-2085

2088-
2092 Juniperus erythrocarpa
4 Agosto 1972 FRUIT PINK, Common 4-6 ft.
Shrubs.
With OAK + Acacia in Savanna
PASTURE, Very common in SURROUNDING
hills. 6000 ft.

14.2 miles SE of HUEJOTITAN,
on Road from San FRANCISCO
del ORO to HUEJOTITAN

10.4 mi. S of Huejotitan,
Pink Berry Jr. Comm.
at LA CASITA RANCHO

Huejotitan 27°04' x 106°12'

↑ See map in this field book

2093, 2094. Juniperus deppeana ROBUSTA
to 2097 (2098, 2099, 2100 also)

4.4 mi. SE of HUEJOTITAN, CHIH.
5 Agosto 1972 (ROAD from San FRANCISCO del ORO TO HUEJOTITAN, CHih.)

along stream, and in base yard in village of 3 houses. / OAK-ARBUTUS SANDY SOIL, 50% Rock GRANITE large trees, Rounded-ovoid crowns, erect twigs.

No data CARDS punched yet. 28 Ag.

2093 6ft., long rect plates, 2" dbh. Tan Black bark / irregular Crown along road. ruptured gland, Fr. coppery br.

2094 25 ft. rect. Bark. 24" dbh, fr - blue green immature, Coppery mature. Red Bark. along stream ruptured glands.

2095 branched at base, conic. 12" dbh. 1/2" Bark, small plates, Ruptured glands. green br. 5 ft.

2096 1 stem, erect — 6-8" dbh
Slightly twisting, plate bark, 1 cm.
15 ft. tall, erect br., twig. crown

2097 many br. at base, 10 ft., 10" dbh
Bark rect. plates lt. grey br. 1 cm.
berry copper.

2100 a male (not) collected at site 45 ft × 4 ft dbh
along stream - with long pith bark,
stem slightly damaged, with
~~mistletoe~~ PHORADENDRON
(4.7 mi. S of HUEJOTITAN)

2098 Dorothera.
5 Agosto 1972 yellow flowers fading to Red orange.
Common in clumps but rare to
occasional along stream bank.
(4.7 mi. S of HUEJOTITAN)

2099 MISTLETOE on Walnut along
STREAM Bed (4.7 mi. S of HUEJOTITAN)

2100 Mistletoe on Juniper

Las Nieves, Dgo. 26°24' X105° 22'
Bruno Martinez.

Slide 2-2,3 →
at km 78

Benjamin Ukins - Independence
Reform

Opposite road from
each other

slide 2-4
Church at Rodeo, Dgo. →

2101-2105 Juniperus erythrocarpa
fr. pint.

5 Agosto 1972 Rt. 45 (road to Durango) 1615 m = 5300 ft

0.3 mi. = 0.5 km N of Km 89, S of Las Nieves, Dgo.

OAK - Pine Juniper grassland savanna pasture.
Sp. common over acres of land, old
contorted, laced grey black bark.

2105a. = Zinnia with Reddish flowers
2105b. ~~Dipsacales~~ Eryng. pin (Umbell. fr.) blush fls + white bracts

2106 6 Aug. Oenothera
fl. yellow fading to orange red.

near Km 68, Rt. 45 N of
DURANGO at
BRUNO MARTINEZ, Dgo.

Common between Road and Town
in GRASSY PASTURES,
moist soil in small rocky
Bottomland.

Juniper - CEDRO in Santiago
Pagasquiano

Carreras = 25°19' x 105°41'
Corrales 25°13' x 105°34'
Sandias 25°15' x 105°36'

2107. Juniperus. erythrocarpa
pink fr.
1 mi N of Km 46
Just South of Carreras, DGO
on Route 8 (S of Tepehuanes)
Juniper grassland scrub., steep
6 Agosto 1972 slope, West side of Road.
Old fr., with bromeliads,
very few trees with fruit.
(N of Santiago Papasquiaro)

2108-12 Juniperus erythrocarpa
pink fr.
6 Agosto 1972 Route 8, 0.6 Km N of Km35
(between SANDIAS and CORRALES), DGO
(1 mi N of corrales)

Junipo - legume - Opuntia woods on
West side of Road. in Pasture
Junipers at bottom of hill with
abundant fruit. Most upHill
lack ripe fruit, but have
cones for next year

Pueblo Nuevo. Municipio de El Salto. Dgo
23°23' × 105°23'
El Salto = " "

"Common" along W edge of road on bank of hill near stream. fl. pink ~~red~~ red., sepals reddish. plants occasional.

Also Km 140, W of El Salto
Yellow & Pink Oenotheras

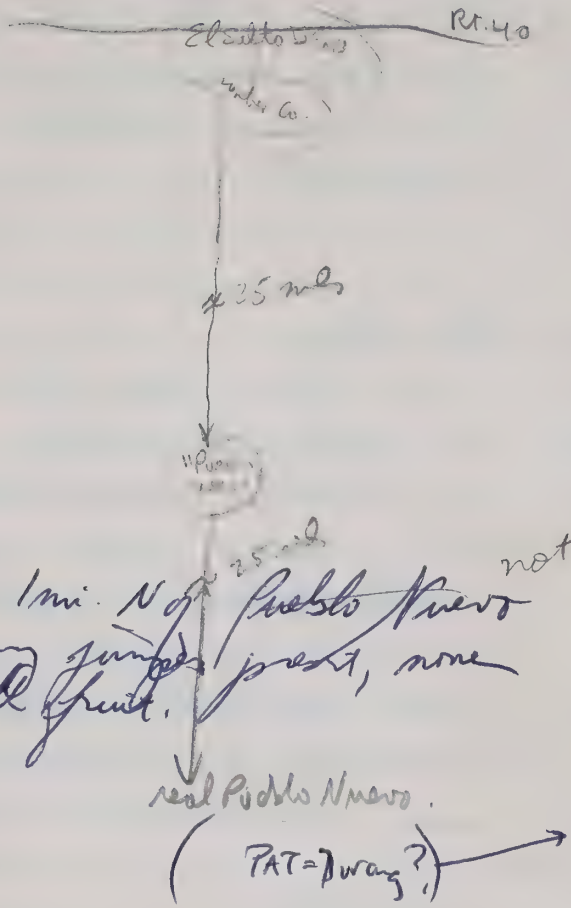
2113 Cupressus lusitanica ??
in Cultivation at edge
6 Aug 72 of orchard near Road.
Rt. 39 near Canatlan, Durango
15 feet Tall

2114-18 Oenothera
On Road from El Salto, Durango
August. to Pueblo Nuevo. 26°, 8700 ft.
on limestone, sandstone, Road
edges + damp spots with
striped pines and junipers

ll pink → deep red
at 18.1 mi. S from town Square
in El Salto

2120-2127 Oenothera
Red and yellow spp.
loamy edge of road with
herbs. under pines, oaks, junipers.
7 Aug. pink de, 10 mi S of lemon yellow
de.
Y + P de all way to
Pueblo Nuevo, especially just outside
of town

slides 2-20, 21 →



2125 Laced bark tree, few f. J. Pat.?

2126 J. Dgp. Quad bark, few fruit.

0.4 mi. N of Pueblo Nuevo, DGo

7 Ag 1972

Pine - Juniper woods, near Corral, few trees with berries.
1 Patmeria, others are Dgp Rob.
Rocky area

2127-2132 (2127 = Jp. Pat. ♂, 2128-2132 = Jp. dgp.)

Pine woods with some junipers,
7 Ag 1972 West side of road
2.9 mi North of Pueblo Nuevo,
East of Corral, along roadside.
very few trees in fruit,
difficult to find 50.
Only 1 Pat.?
Penstemons common.

not PN

2.5 mi. N of Pueblo Nuevo. -
Junipers with checked bark near
base changing to long fibrous
strips above. Variations great
in bark patterns. No females on
this site. One female seen with
fine checked bark.

8 Agosto 1972

not PN

Arroyo - 11 mi N of Pueblo Nuevo
Stream through bottom,
Sides very deep in spots,
Pines with junipers. Junipers
50-60 feet tall. J. deppeana not first.
Old man's head lichens in J.
Arrothers pink & broad leaf
yellow comm. Columbine, Senecio,
Ranunculus, Lupines, Thistles, Senna
& Mosses.

Stanleyi Leaves of Yg tree

2133

Juniper

not PN

1.6 mi north of Pueblo Nuevo
Pine - Juniper woods, over
shallow soil on rock.
1 tree with fruit apparently
all deppeana in this area
Jps. to 20 ft. , 8700 ft alt.

8 Ag

Pueblo Nuevo (El Salto Map) =
23°23'N x 105°23'W

2135 = Juncus
2135a = Aquilegia
2135b = Crassulaceae

2134 Oenothera (some site as 2133)
yellow fl., occasional in
the clearing, with high organic soil

2135, Jp. Patoniana ?
2136
att 8200 ft.
17.6 mi N of Pueblo Nuevo, NOT PN
8 Ag. on west side of road, on Rocky
outcrops with Penis, commelina,
Dahlias, geranium, clovers, sedge,
Sedum & Compositae. Apparently
only Jp. tree present.
(Penis to same sig as Jungia)
those Jp Pat are mixed in with
Jp. Deppeana. But these have
bad fruit. And the old dead, Pat.
found. No young Pat can be
found.

Pat. also seen at 20.2 mi. N.,
and 21.4 mi N.

(Pueblo Nuevo Church to
Town Square in El Salto = 23.9
mi.

La Ciudad = 24:23 N x 106:03 W

Las Adjuntas =
23°44' x 105°31'

I Deppea Robusta

2137 — 2.7 mi. E of La Ciudad (on Rt. 40)
8 Aug. West of El Salto, Durango. (Km 110)

in Arroyo San Antonio parallel to road.
Mostly pines. 2 Trees only,
very old and tall. One young Deppeana
robusta and one old deppeana robusta
little understory.

2138 to 2144 — J. depp. robusta
mixed junipers, 4 mi. E of
8 Aug. La Ciudad. Pines with many
junipers, ranunculus, oxalis & other
Composite.
On North side of Road, 0.6 mi.
West of Km 138. east of La Ciudad,
(W of El Salto, DGO.) Rt. 40

Rt. 40

2145-2146 — 1 mi. West of Km 121., West
of El Salto, Durango. Rt. 40
(West of Los Adjuntas, DGO.)

8 Aug. Pine-Juniper, pasture- lowland
5 mile Rd. dense area. Only two Junipers
in front (yellow Oxalis present)

Hacienda Coyotes = El Salto
Ojo de Agua Loc. 23.43 x 103.44
Sombrerete 23.38 ^ 103.39

These pjs. started at
Km 113 = El Calabazal, Loc. →

Gloeo ruptured on some → ←
trees. This site is just off
Rt. 45, at road signs for
Ojo de Agua. (100 yds. off Rt. 45.)
elev. 6900 ft. Mostly several br. stems
to trees, branched near ground.

2147-
2153 Juniperus deppeana robusta
Hacienda Coyotes, Durango.
3.1 miles West of Km 89,
just East of El Salto on Rt. 40
(off Rt. 40, on farm Road.)
Coming out of mountains into edge
8 Aug. of grassy flat, pasture — opposite
sand pit.
fruit abundant, leaves pungent.
1 tree loose dropping growth.

elev. 8200-8400 ft.

Yellow Oak then present.

2154-
2158 Juniperus deppeana Zacatensis
Rt. 45, 0.3 mi. W of Km 110.
9 Aug. Ojo de Agua, Zacatecas
(W of Sombrerete, Zac.)

Juniper dep Zac - Pinus Cembroides
over pasture with opuntia, legumes.
50-75% rock cover. Jp common,
fr abundant heavily blomed. fruit
red-br. ripe. One tree 20-25 ft.
x 2½-3 ft dbh. bark light grey,
light flaky stacked plates, not dep. like bk.

El Alamo, Tar. - near
Ojo de Agua (23.43 × 103.44)

Jiménez de Teruel, Tar
23.10 × 104.05

2159-
2163 Juniperus deppeana Zacatecas to Potosi

9 Aug. El Alamo, Zacatecas.
(0.1 mi. N of town)
Rt. 45, 0.7 mi. N of Km 104.
(= 9.1 mi. N of Sombrerete, Zac.)

Pasture with Juniper,
♀ ♀ many ♀ in fruit,
Juniper very common in immediate
area, heavily fruited, Jp. sprouting
in some areas but not in areas
of large trees.

2164-
2170. Juniperus deppeana (~~durangensis~~?) Jdp

0.5 mi. S of Km 79 (Road from
Sombrerete to Jimenez del Teul, Zac)
9 Aug. = Rt. 15., On W side of
Jimenez del Teul, Zac.

Opuntia, Yucca, Jp., ferns,
Thorn brush Common.
~~Durangensis~~ bark?, lovely branched.
Tadzhera

Jiménez del Teul
23°10'N × 104°05'W

Sauz, Zacatecas ≈ to Jiménez del Teul

Chalchihuites 23°29'N × 103°53'W
Mina Dolores
Sombrerete 23°38'N × 103°39'W

2171,
2172.

9 Aug. Along valley bottom, along streams in fields.
0.3 mi. South of km. 77 near SAUZ, Zac. (N of Jimenez del Teul, Zac.) Rt. 15 (Sombrerete to Jimenez del Teul, Zac.)

2173-2177 Juniperus deppeana zacatensis
8000 ft.
1.1 mi. S of MINA Dolores, Zac. (just N of Chalchihuites, Zac.) on Rt. 15 (Sombrerete to Jimenez del Teul, Zac.) (near km 44)
Fruit rose, heavily blomed. On slope at West side of Road. Grass with juniper dominant over large area with small scrub shrub.
soil white.

At. Mina Dolores, Zac. Dgo Zac. becomes alligatored bark.

78

EL Limon 79

N of Los Veneros, Jal. 80

& Jesus Maria, Tac = 21°05 x 103.05 81

82

83

Magdalena, Jal. = 20°55 x 103°57

2178–2183 Juniperus Flaccida
Route 54 (41) At. Km 88
9 Aug. North of El Limon. (Jalisco or Zac.?)
(North of Guadalajara, Jal.)
(north of Tecalcon Jalisco Est. border)
Rhus, legume Juniper thicket. Juniper very common, grasses + Composits. on slopes: almost semi tropical vegetation.

2184-88 Juniperus Flaccida

10 Aug. 3.9 mile, east of Magdalena on Rt. 15 to Tequila, Jalisco. near Km. 69.
(Flaccida is common from Tequila to Magdalena.)

on north side of road in "arroyo", (nearby grasslands) with Juniper flaccida, tropical-subtropical vegetation in arroyo, grasslands at top of ravine.
Juniper trees 60-80 ft. in arroyo.

Arrecife (de Navarro) = 19°46'N x
104°22'W
Corcovado = 19°51'N x 104°17'W

2189-
2193 Juniperus flaccida

12 AUG. on hill behind Mina de San Francisco, Jalisco. North of AUTLAN, Jalisco. S. (Neon) El Corcovado, Jal.) J. flaccida, sparsely branched, typical, but not flaccid. Common near house, on opposite side of hill from mine, near corn fields., in Legume shrubs oak-willow oak scrub.

Juniperus flaccida seen at
TUXPAN, Mich. 19.34 × 100.28
14 Aug. EL MALACATE
AGOSTITLAN km 19.33 × 100.41
LA Soledad (km 117)
JUNQUEO (km 113 19.27 × 100.29
19.26 × 100.21 ← ZITACUARO, CURUN GUEO, → (ON Rt. 15, Michoacan.) 19.28 × 100.21

Cuitzeo 19.28 × 100.21

Nevado de Toluca 19.08 × 99.44

2199
2200
01
02
03
04
05
06
07
08

2194-
2198.
14 Aug.

Juniperus flaccida

6000 ft.

km. 103., on Rt. 15 (Zitacuaro to Morelia, Michoacan.)
Just west of Puerto del Gato., Curungueo., Mich. (?)

On steep slope of hill at edge of pines and grassland. Not many shrubs with fruit. very damp clayey soil on N side of rock.

2199-
2208
(2 have pome. Ipt
(14 Aug.)

Juniperus monticola f. compacta

NEVADO de Toluca, Mexico

13000 ft.

on rock outcrops. large spreading prostrate shrubs 5-8 ft. diameter spread. Plants with pines + at edge of pines at area just at and above timberline. Grasslands, composits, castilleja, thistles, moss. Volcanic rock, on lower side of rock.

Tenancingo 19.58 × 99.35

10
11
13

Tonatico, Mex 18.47 × 99.41 (?)

2209
2210(?)-
2213

Juniperus flaccida

0.3 mi. North of Km 44, being
1 mi. N of Tenancingo, Mex.
15 Aug. Rt. 55, S of Toluca, Mex.
7000 ft. elev.

Oak-pine-juniper with many ferns, selaginella, legumes, mimosoid legumes, grasses.

Clayey, very moist. Trees with bromeliads, insect damage and Polypodium.

Same Jp. common near Km 78

2214-2218 Juniperus flaccida

15 Aug. 0.3 mi. N of Km 88 on Rt. 55, South of TONATICO, Mexico.

Cultivated area, edge of field near beehives. Juniper very common in area. Tall 30-35 ft.

bark of J. flac.- laced transactions to overlaid fibrous strips.

TANTOCO

aprx. 19.16 × 99.26

(= Ocoyoacac, Mex.)

Río Frío 19.21 × 98.40

2219-
2228

Juniperus monticola

3000 m
9800 ft. ab.

17 Aug.

appx. ½ Km. W of Km 31,
on Rt. 15, (Mexico-Toluca)
West of Tan Toco, Mex. at highest
point in pass in mountains.

Under Hemlock forest. Junipers major
under story shrub. to 30 feet tall,
erect spreading, branches along
ground. into cleared area under
power lines. // male cones are pre-
anthesis // many sterile in fruit.
Old fruit are red-brown brick color.

2229-
2233
(2234) → Pink Oenothera (lonely scan)

Juniperus depeana leaf

18 Aug

along banks of ditch on North
side of road.

On old Rt. 190. (Puebla - Mexico)
East of Rio Frio, Pue. State Berg
2.7 mi. West of Santa Anita
between old road and corn fields
on N side of roadway.

J. deppeana seen at
Tlaxcala
many at Presa Cardenas
Km 10 Rt. 119, N of Apizaco

Apizaco	19.25 x 98.09
Tlaxcala	19.19 x 98.14
Cardenas (?)	19.39 x 98.28 (?)

Juniperus deppeana

2235- Rt. 119, km. 9 north of Tlaxcala,
2239 ~~Tlaxco~~ = 0.5 mi. South of Belen.)
Tlaxcala

18 August Junipers with Legumes shrubs + Eucalyptus. formerly heavily disturbed dwelling site. Now trees scattered in and around fields and pastures on slope. Tlax on both sides of road.

Bromeliads on Jp.

2240- Juniperus deppeana.
2244 (2245) → (Oenothera in fruit, common)
18 Ag.

Rt. 119, 2.5 mi. NW km 10, north of Apizaco, Tlaxcala.
7500 ft.

acres of Junipers, Rhoadendron present. Grassland., Jp. very common in valley bottom, dry sandy soil with grasses, herbs and cultivated Agave.

TOWN of
Perote 19.34 × 97.14
Cofre de perote 19.29 × 97.08

(Cofre de Perote = Nauhcampatepetl mt.
= Volcan Cofre de Perote)

El Seco = San Salvador el Seco 19.08 × 97.29
Zacalejo, Pob. 19.16 × 97.32
Ciudad SERDAN 18.59 × 97.27

Juniperus Rzedowskiana common east
of EL Seco
also 2-3 km E of Cd. Serdan

19 August. Oenotheras. at Top of Perote, Vera Cruz, around town in saddle of mountains.
light yellow → w → DR.
very common along road sides and along potato fields, in clay soil 9200 ft.

2245-2249 Juniperus dopplera.
~~"Type Locality"~~ ?? Yes

19 August. Llanos
~~Cafe~~ de Perote, Perote, Vera Cruz.
just below modern, multistory bldg.,
on road up peaks Behind
Town. (just East of the Town of Perote)
Grasslands, near streams, pines
at edge of area. trees 20-25 feet,
very red in sandy soil.

2250 Juniperus dopplera.

19 Aug. Km 3, Rt. 140, North of
ZACATEPEC, Puebla.

Juniper large size, in corn field
with volcanic ash soil, on
West side of road.
Junipers common for 5-6 km around
this site.

18.08 x 97.40

HUAPANAPAN = SAN FRANCISCO HUAPANAPAN
Tehuacan, Puebla. 18.27 x 97.23

(Refugio del) Maiz, Dax.

some small scrubby shrubby plants (1/4)
due to overgrazing by sheep.)

---

site N of Cieneguilla, Dax.
17.29 x 96.57

2251 Taxodium mucronatum (fr. green)
2252-2256 Juniperus flaccida (fr. red-br., floral) ripe now.
5600 ft.

80 Aug 1972 in fan palms, + scrub.,
some cacti on
Rt. 125, 0.3 mi. N of Km 81.
South of Tehuacan, near
HAUPINSPAM, Oaxaca.
along arroyo at up hill east of
it. Jf. locally common.,
for 5 miles S of site.

2257-2261 Jungiendes flaccida

Rt. 190, just east of (Refugio del) Morelos,
Oaxaca at Km 59
(Huajuapan de Leon - Oaxaca Carretera)
7000 ft.

on S side of Road, mostly
grasses in now-eroded area. Jf.
on slope heavily eroded hard clay
→ fr. heavily, red brown.
tree 50 ft tall across road.
bark cinnamon color below, below
strips. Jf. common on slopes
of valley (fertile)

17.28 x
NOCHIXTLAN, OAX. (= ASUNCION N.) 97.14
ZAHUATLAN, OAX (
La Cumbre, OAX 17.11 x 96.36 (?)
Patio Escondido, OAX
HUITZO, OAX
OAXACA, OAX 17.03 x 96.43

on Rt. 190 W of Oaxaca
glacials also seen at Km 88,
along stream in cultivated areas.
near NOCHIXTLAN, Oax., also
Km 93,
also Km 97 = ZAHUATLAN
at La Cumbre (Km 106)
near Km 150,
Km 153-154
Km 155 PATIO ESCONDIDO
Km 157-158 in arroyo
Km 162 HUITZO.
to 164

on Rt. 190
also. Km 59, East of Oaxaca
Km 68

La Trinitaria, Chiapas 16.07 × 12.03
Monte Bello, Chiapas 16.07 × 91.40

2262-
2271

Juniperus comitana Martinez

5000-5200 ft.

21 Aug.

12.7 miles East of La Trinitaria (Rt. 190) on Route ~~190~~ 17, on road from Rt. 190 to MONTE BELLO., Chiapas.

Trunks slim, bark thin. bottom of hill, Liquidambar shrubs, Acacias, Cycads, many Juniper. 20-30 ft tall Bark thin., Lacerated to fibrous, fruit immature, tree very common, now used for cattle pasture.

Juniperus gamboana common from Km 102 to Km 165 (Comitan) = San Cristobal las Casas to Comitan. in (oak-deciduous) Pine woods. 30-35 ft. x 18" dbh. Rounded Cones.

seen at

Km. 163 La Cabaña

Km 160 El Membrillo

Col. EFRAIN GTZ.

Km 155

San FRANCISCO

Km 151

J. gamboana seen on Rt. 190 at...

St. CARMAL AMPIO

Km 148 LAGUNA LARGA
(RANCHO Sidon)

K c 145

San ANTONIO
Las Flores

K. 140

K. 136 Laguna CHAMULA
CRUZ QUEMADA

K. 132

El PORVENIR

K. 130 TULANCA

K. 125 SAN Nicholas
AMA_TENANGO (?)
Villa Los ROSAS

K. 120. FINCA La GRANADA
La CAMPANA
TEOPISCA

K 115

SIBERIA (CAMPAMENTO SOP)

K. 100 FLORES MAGNON

JP. ↑

Teopisca, Chiapas
16.31 x 92.29

21 Aug. Jumpeiro Gambara Mountains. 6000 ft.

2272-2282 Rt. 190, Km. 132, 9 mi. SE of Teopisca (between Teopisca and Comitan), Chiapas.

in oak-Jungia pine with, many pinipas, few with fruit, few fr. mature. Some herbs below

Epiphytes = orchids, liches, bromeliads, ad lt. foliage also mistletoes.

Jpp. on both sides of road, Older Jpp with few fruit.

2283 Asclepias

flowers pink to magenta, occasional to common roadside in rocks = site same as 2272-2282

Oenothera with yellow fl., and
Cardiine leaves common
at pyramids of Teotihuacan

2293-2297

2298 Juniperus monticola Martinez

J. deppeana

23 Aug. 0.4 mi. off Rt. 105, on road to El Chico., Hidalgo.

8800 ft.

J. monticola in oak woods as understory. # 2298 J. deppeana is mixed in with monticola nearby., on hill on east side of road. Both species very common in area and surrounding hills.

J. deppeana has Polypodium on it.

24 Aug. 1972. Juniperus flaccida and J. deppeana. common along stream near Graniery

0.7 mi. NE of Hueyapan, on road to HUASCA, Hidalgo off Rt. 105, North of Real (Mineral) del Monte. No fruit present. Many galls on flaccida. J. flaccida to 30 ft tall

24 Aug. J. deppeana near ——, Rt. 105, Hidalgo,
Omitlan
Velasco
north of Real del Monte
South of Real del Monte
near El Chico,
and in hills just North
of Pachuca.

2299 Oenothera white fl. fades pink, rare
2300 Argemone grandiflora fl. w sep. ½, o ½, o apex
2301 Argemone grandiflora fl. w. sep ½, o ½, fewapex
Argemone 2-3 ft tall

24 Aug. 0.2 mi. S of Tablon, Hidalgo,
on Rt. 85, (North of Rt. 45
turnoff.) 0.9 mi. S of Km 26
north of Puerto de Chiti.
Desert scrub, along edge of
road, into desert scrub
6200 ft.

24 Aug. One J. floccida seen near
Km 85, Zimapan, Hidalgo

2302 Oenothera

fl. y → OR

24 Aug. up on hill on east side of road in uncultivated area below agaves, in open field. Rocky clay fields. 6200 ft.

near Puerto de la Estancia, Hidalgo Rt. 85, 0.3 mi. S of Km 42. (North of Zimapan, Hidalgo)

24 Aug. [gp. flaccida occassional on steep slopes appx. Km 33, Rt. 85 north of Zimapan, Hgo also common near Francos, Hgo.

at Km 53→57, 62. G. flaccida, big old trees, no fruit seen., very common with pine, scrub-oak, also common near Km 75, DURANGO, HGO.

2304-2308 Juniperus. monosperma graciliss

on hill north of TRANCAS, Hgo.
(Rt. 85, N of Zimapan, Hgo.)

24 Aug. 0.1 mi. S of Km 51.

fruit glaucous - bl. white., disease galls, insect damaged fruit. Trees are mixed with cut over J. flaccida which lack fruit.
a few pines, many labiatae. .6/100 ft.

2309-2313 Juniperus flaccida

24 Aug. Rt. 85 4 mls S of Km 90,
(between S of Agua Fria (Km 92))
and S of Jacala, Hidalgo.
site (about 13 km S of Jacala)
Dense Juniper woods with some deciduous trees, shrubby Rhus trilobata, Rhus sp., Crataegus sp., Yucca, roses, lazures. Side of hill on east side of road.
few fruit on trees.

[Jf-flaccida common at Km 116 Rt 85, N of Jacala]

San Luis Potosí, SLP 22.09 x 100.59
San Francisco 22.04 x 100.37

SLP, SLP = Km 262
at Circle on
East side of Town.

2315 *J. flaccida*

25 Aug. 0.1 mile East of Km 208, site being 7 miles E of San Francisco, San Luis Potosi on Rt. 70
(East of SLP, SLP, approx. 54 Km)

galled branches, fruit with sea foam green bloom, in walnut-oak deciduous woods on North side of road. Trees, large, round crown, red-brown fibrous bark. Clay soil.
6760-6800 ft.

[Junipers common from Km 208 → 211
Sparse to Km 220 (toward SLP)]

along canyon on both sides of road, S side of canyon.

No #'s 2316 to 2415 !

2.97

Palm Hbs, Thames. 23.18 × 99.33

17 b/4

2416–
2420 Juniperus monosperma gracilis (f. red blue)

2421 Juniperus flaccida (f. pen.)

26 Aug. Rt. 101, 0.6 mile North of Km 78, South of Palm. Tanks, TANKS
alt. 4500 ft.

(near 5 straw huts), along rock outcrops on slopes of small valley, on east side of road.

J. mono. g. short shrubby growth
J flaccida 3-4 trees here, more in ravine across road.

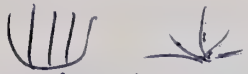
In deciduous scrub with agave & fan palms & herbs.

J. monosperma rare at Km 70 ↔ 75,
very common at Km 73.
Rt. 101, S of Palmillas

2422-2426 J. monosperma gracilis (fr. blue-green, immature)

2427 Asclepias (fl. y → peach OR) common, near road.

26 Aug. Rt. 63, 4.9 mi. S of Km 90 north of Dr. Arroyo, N.L. (S of Laguna) 5500 ft.
in desert scrub. of opuntias, other cacti, Yuccas, Agave, shrubs. Common on E side of road.



With phoradendron bolleanum, to 8 ft tall

(Site between Dr. Arroyo + La Escondida

Few ♀ with fruit now, immature fruit and blue-green bloom.

[common for 2-3 mi. N of site mixed in with pine; also near Puerto de Cienegilla

2428-2432 Juniperus monosperma gracilis

0.4 miles South of Km 14.
On Rt. 63 (Carretera Puente de Pastores to Matehuala, SLP)

26 Aug. South of Galeana, NL (Pto de Pastores)

1950 m.
6400 ft.

dense field of shrubby Juniper near road. Oaks & Pines behind Juniper. Some grasses & herbs below the Jp!

Jp. fr. reddish-wine appearing.
Red-fl. with bloom.
Phoradendron bolleanum in flower, on Jp.

2433- Juniperus ——— (5)

2442 Juniperus ——— (5)

27 Aug. fields full of Juniper, very common with Opuntia, Rhus, Pine, Mahonia trifoliata.
Sympatric Jps. on both sides of road. Area occasionally used as pasture.

0.5 miles South of Km 13, on Rt 63

Pueblo de Pastores, NL 24.27 × 100.02
Santa Clara, New Galeana NL —

South of Puerto de Pastores, NL,
near Santa Clara, NL.
(districts of Municipio Galeana)

[Yucca in Juniperis near Km 13,
Jp. to near Sta. Clara 5900 ft.

2438 Oenothera (white → pink)
2439 Oenothera (y → or.)

27 Aug. occasional to rare, along road
at site of 2433-2442.

2443 Oenothera (mueller?) fl. pink at 10:30 AM

27 Aug. 0.5 mile above Km 14, on
road from town up Cerro Potosi,
Nuevo Leon, 9200 ft.

On road cut on rocks, under
pines & herbs,
10-15 plants here.
common (?) locally)

Galeana, NL 24.50 x 100.04

Cerro Potosi, Galeana Municipio, NL
24.52 x 100.13

Pinal de Pastores, Mun. Galeana, NL
24.27 x 100.02

San Marcos, municipio Galeana, NL
24.41 x 100.05

2444-2448 Jungeria monogyna gracilis ?

6600 ft.

fruit red, reddish blue with blom.
with agave, Madonia triflorata,
27 Aug. Oaks, Pines. Rocky area
near arroyo, Trees are near
road.

0.1 mile above Km 2, on
road to Micro ONDAS estacion,
on Cerro Potosi, Galeana, N.L.

2449-2453 Jungeria flaccida

Km. 76, on Rt. 60. Road from
San Roberto to Puerto de Pastores,
27 Aug. Galeana, NL., site at Km 76
is 1 Km W of San Marcos, Galeana,
Nuevo Leon.

Pasture with agave, opuntia spp,
acacia, deciduous shrubs, Pinus
Quercus

Galls, Spanish moss present.
Pl. blue green blom, showing green
underneath. bark
Cinnamon color under crossed fibrous
strips.

Tokio, NL
San Roberto, NL 24.43 x 100.17

yellow Oleanders at 'RANCHO La Luz'
Sign on Rt. 57, N of
San Roberto, NL.

[Jp. flaccida at Km 75, San Marcos,
Galeana, SLP]
[W to Km 86., Jp f. mixed with Yuccas,

2454 to (~~2454-2458~~) Jp. pink f. abundant
2464 (~~59-63~~) 2462 Jp. saltillensis abundant
((64) Jp. ______ rare. (R-Br. f.)

27 Aug. Tall oak - short juniper scrub, on a limestone, white soil. Some grasses (Bouteloua) a few opuntia.

Route 60, 0.3 mi. E of
Km 78., East of TOKIO, N.L.
(E of San Roberto)
near adobe house on S side of road.

2465 - Juniperus ~~monosperma~~ (var. grac. ~~monosperma~~ ?)
2469. 6000-6500 ft.
Arboreal (arbores.) juniper. fruit red-blue. with bloom.
large trees common on desert grassland. a few opuntias and grasses, very few shrubs.
On east side of Route 57,
0.4 mi. S of Km 153,

	La Trinidad, N.L.	24,55 x 100.24
	NAVIDAD, NL	25.03 x 100.37
La	PROVIDENCIA, NL	25.05 x 100.38

(= 5.3 mi. S of La Trinidad, NL) 88 km

Dark. lacey breaks into longitudinal strips curling at both ends.

Area was apparently covered entirely by gypsum at one time. It is a grassy plain now, somewhat desertlike. Trees spread over wide area now, very odd in some places.

Rt. 57

some trees from site to La Trinidad also at Km 182, La Rosa, NAVIDAD, La PROVIDENCIA and Km 189.

2470-
2471 Juniper
pink fr. , fr. very common.

27 Aug. On East side of Rt. 57, Coahuila
0.9 mile S of km 232
(S of Saltillo, Coahuila)
Very common under pines with Nolina texticola, Rhus, Grasses & misc. herbs.

(Site S of 'Los Lirios' sign.

[J. flaccida at km 230
Scrubby J. pinkfr. stand at Los Pinos, Rt. 57,
S of Saltillo, Coah.

2472-2474 Jp. _____ Pink fr.
2484 Jp. saltillensis recurved tip of ult. br.
2485 Jp. _____
Very common in thorn undergrowth with pins., acacia, ephedra, Eschscholtzia
27 Aug

2 or 3 Jp. sympatric spp.

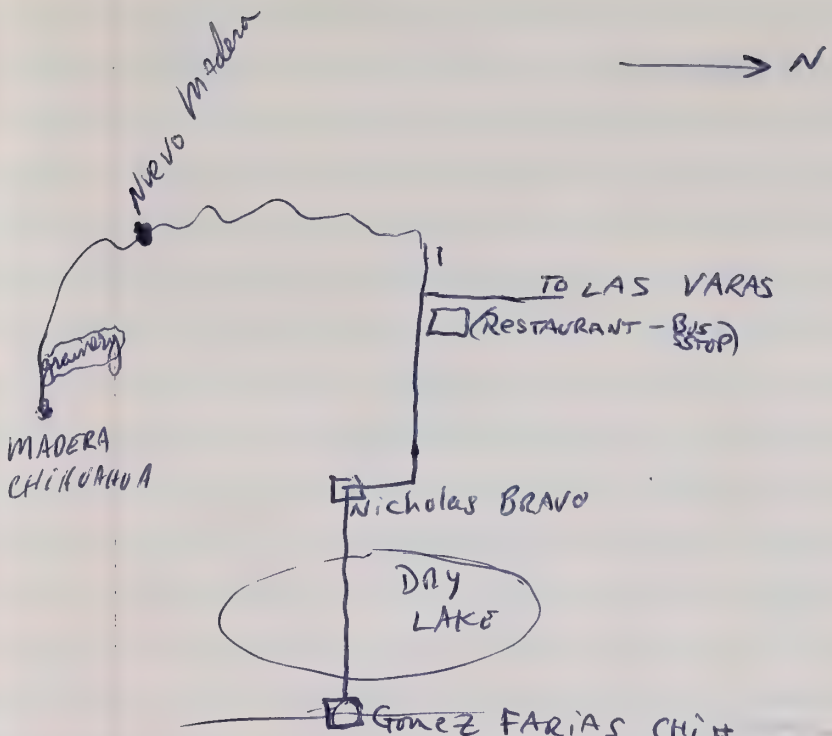
0.3 mi. Jp. Rt. 57, on Road to Los Lirios, Coah. (Rt. D15)

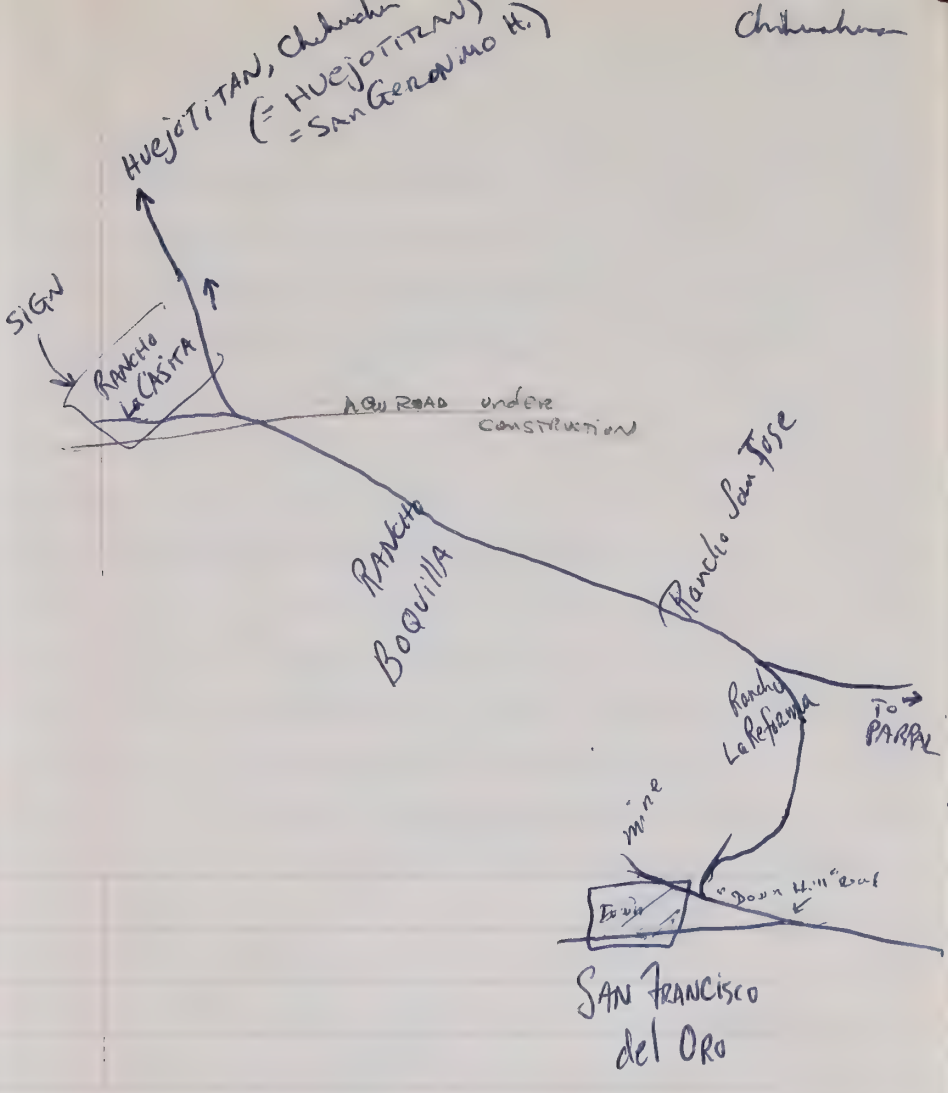
2486 Dorothea

fl. Y→OR.

21 Aug. common along road edge at site of 2472-2485, mixed in with rocks with Eschscholzia, Y composites + grasses.

Chihuahua


N
NUEVO Madera
TO LAS VARAS
(RESTAURANT - BUS STOP)
Brewery
MADERA CHIHUAHUA
Nicholas BRAVO
DAY LAKE
GOMEZ FARIAS, CHIH
TO → CASAS GRANDES, CHIH.


HUEJOTITAN, Chihuahua
(= HUEJOTITLAN)
= SAN GERONIMO H.)
Chihuahua
SIGN
RANCHO LA CASITA
AGU ROAD UNDER CONSTRUCTION
RANCHO BOQUILLA
Rancho San José
Rancho La Reforma
TO PARRAL
mine
"Down Hill" road
Town
SAN FRANCISCO del ORO

Collections made in December, 1972
trip in search of
Juniperus durangensis and
Juniperus jaliscana, with
Jon. Richards.

Dec. 10, 1972

2517 Male Juniperus deppeana
much prior to anthesis.
15 ft × 2" dbh
Bark - lt. grey, flakey quad.
Common & occasional
with 2 spp of Pine, oaks,
arbutus, over grasses & cacti.

8200 ft.
S. side of Rt. 40, at Km 76,
west of Durango, Dgo.

2518 Pinus engelmanni
40 ft. × 1½ ft dbh
Bark black, cracks show
brown with reddish tint
Common

2519

11 Dec 1972

male Juniperus deppeana
with evergreen oaks,
various pines, ericaceous
undergrowth

See # 25-20
for Loc.

2520

female Juniperus deppeana
bottom of valley, along dry stream
Bark Km

2519, 2520 at Km 154½ on
R140, at
Puerto Buenos Aires,
west of El Salto D.G.O.
8600 ft.

---

11 Dec. 1972

Km 152 on Rt. 40, west of El Salto
on N side of Road.

2521

Juniperus
Bark interlaced - long strips 3 ft.
fibrous strips above
few fruit
Bark on trees nearby similar
8700 ft.

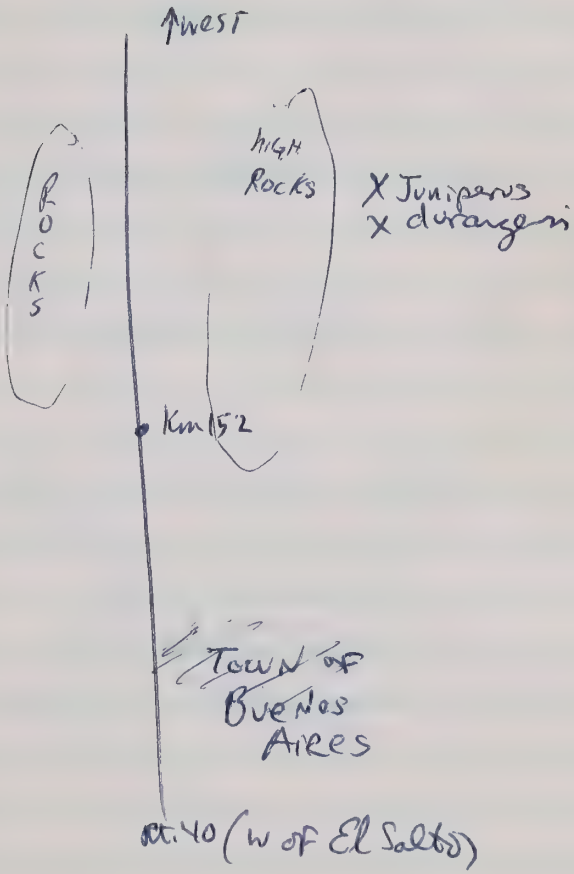
2521 (cont'd) with evergreen oaks,
Arbutus, Pine spp., J. deppeana,
Arbutus shrubs
no Juniper reproduction.
Junipers with mistletoe.

Junipers are reproducing in
area partly cut over.

2522, Juniperus deppeana. } Bark-bottom
2523, } Plates long, upper
2524 } Long Plate.

2525, J. d. highly checked bark.
2526

Bark blackish gray
Very old trees, few fruit,
few branches
about 3 old trees
Polypodium + moss.


↑West
ROCKS
High Rocks
X Juniperus
x durangensis
Km 152
Town of
Buenos
Aires
Rt. 40 (W of El Salto)

2527 Moss with capsules
11 Dec.

in clearing in Pine woods, 1000 ft off road., common with Ranunculus, Gentiana and a few grasses

On S side of road at site of 2521-2526

appx. 9000 ft elev

---

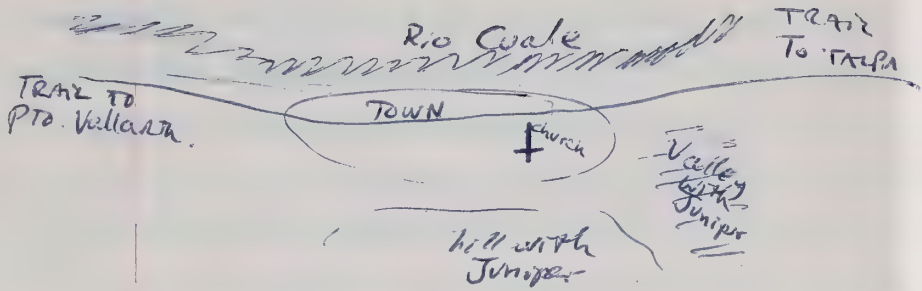
12 December 1972

← 2528-2539 Juniperus durangensis.

Common with a few oaks + arbutus, very few pines on rock surfaces in clearing, near stream at Pass, Km 152 on Rt. 40; ½ mile W of Buenos Aires, DGo.

trees usually 6 ft but to 15 ft. few females with fruit males pre anthesis taller trees contorted to 18"-20" dbh

2534 J. deppeana var. robusta male


Rio Cuale
TRAIL TO TAPIA
TRAIL TO PTO. VALLARTA
TOWN
Church
Valley with Junipers
hill with Junipers

Saturday December 16, 1972

2540-
2549

Juniperus jaliscana
"enebro"
on slope behind town of
Cuale, Municipio de Talpa de
Allende, Jalisco.

Slope of weathered granite with
Pine, "Rosa blanca", "malvaste"(?)
encino oak, ocote pine.,
Stipa sp. on hill Top, very steep
slope.

Very LITTLE surface cover,
goat grazed, burned over
occassionally, Some Junipers
have charred stems.

Bark is similar to J. flaccida
is Lt. brown over a lt. red brown.
NOT as seen on Type Specimen.

Larger junipers are not known in
immediate area but said to
be on some ranches in area of
Cuale

No juniper at Lobos, but at Rancho de San Francisco and Rancho El Tule. - being about 4-5 hr. horse ride from Cuale. (Trees B. Geer there)

USES -

madera = Tables

"fina madera, duro"

Wood - yellowy + lt. pink color annual rings very difficult to see + count.

Chests are made of wood, apparently only used in town, none taken out of town. Poles on front of porches ("Pillars" of house also Juniper.

The fruit is used as a throat medicine.

Boards were used as decorations around picture of saint at one house.

There was little or no juniper reproduction on the slope

where specimens were collected.
The slope is eroded, weathered granite which has fragmented into cubic pieces → size

One specimen of Jp jaliscana may be in Oaxaca near here at Arroyo Dondo 2½ hr. E of Ocotal, by horse, may be cultivated.

---

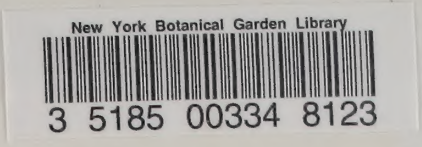
14 December 1972
collections by Robert Goforth

1 to 5 Juniperus monticola collected on

CITLALTEPETL (Pico de Orizaba)
Vera Cruz

appx. 15000 ft on west side, on basalt rocks & cliffs, very much higher than timberline which was appx. 14000 ft

to 1½ ft tall


New York Botanical Garden Library
3 5185 00334 8123

official®
account
books
Ruling :
RECORD
No. 64-5072
$1.19
Manufactured for
Westab inc Dayton, Ohio 45402 MEAD
A subsidiary of THE MEAD CORPORATION